

In the Claims:

✓ Please cancel claims 1-46, and 50-53.

Please add new claims 54-66.

Replace the pending claims with the following:

B²⁰ 47. (Amended) A method for detecting an aptazyme reaction, the method comprising the steps of:

providing a substrate comprising a solid support and a heterogeneous mixture of aptazyme constructs covalently immobilized on the solid support;

providing at least one analyte;

providing a substrate tagged to be detectable;

exposing the substrate and at least one analyte to the immobilized aptazymes whereby the substrate is bound to the immobilized aptazymes upon activation of the aptazyme reaction by the analyte to produce a signal;

washing unbound substrate off of the substrate; and

detecting the signal from the bound substrate.

48. The method of claim 47, wherein the method is automated.

49. The method of claim 47, wherein the signal is amplified for detection.

B²¹ 54. (New) The method of claim 47, wherein the substrate tagged to be detectable is fluorescently tagged, tagged with a magnetic particle, or tagged with an enzyme.

55. (New) The method of claim 47, wherein the solid support is a bead or a well in a multiwell plate.

56. (New) The method of claim 55, wherein the solid support is a bead in a well of a multiwell plate.

57. (New) The method of claim 56, wherein each well contains a bead with an aptazyme construct immobilized thereto which is different from the aptazyme constructs immobilized on the beads located in the other wells of the multiwell plate.

58. (New) The method of claim 47, wherein the analyte is a metabolite or a protein.

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Cont

59. (New) A method for detecting an aptazyme reaction, the method comprising the steps of:
providing a substrate comprising a solid support and an aptazyme construct covalently immobilized on the solid support;
providing at least one analyte;
providing a substrate tagged to be detectable;
exposing the substrate and at least one analyte to the immobilized aptazymes whereby the substrate is bound to the immobilized aptazymes upon activation of the aptazyme reaction by the analyte to produce a signal;
washing unbound substrate off of the substrate; and
detecting the signal from the bound substrate.

60. (New) The method of claim 59, wherein the method is automated.

61. (New) The method of claim 59, wherein the signal is amplified for detection.

62. (New) The method of claim 59, wherein the substrate tagged to be detectable is fluorescently tagged, tagged with a magnetic particle, or tagged with an enzyme.

63. (New) The method of claim 59, wherein the solid support is a bead or a well in a multiwell plate.

64. (New) The method of claim 63, wherein the solid support is a bead in a well of a multiwell plate.

65. (New) The method of claim 59, wherein the analyte is a metabolite or a protein.

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Contd.
66. (New) A method for detecting an analyte in a sample suspected of containing said analyte by detecting the binding of an aptazyme to a substrate, the method comprising the steps of:

providing an array having one or more aptazyme constructs disposed thereon at discrete locations by immobilization of said aptazyme constructs on a solid support;

contacting said aptazyme constructs with a substrate tagged with a detectable label, wherein said aptazyme constructs bind to said tagged substrate in the presence of said analyte, but do not bind to said tagged substrate in the absence of said analyte;

contacting said aptazyme constructs and substrate with in a sample suspected of containing said analyte under conditions which allow for substrate binding;

washing away unbound substrate;

detecting the bound substrate, thereby determining the presence of analyte in said sample.
